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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/530,963 | 06/21/2005 | Menachem Rubinstein | 057878-16 | 3232 |

7590 07/25/2007

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| EXAMINER | |
|---|---|
| SULLIVAN, DANIEL M | |
| **ART UNIT** | **PAPER NUMBER** |
| 1636 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 07/25/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/530,963 | RUBINSTEIN ET AL. | |
| | Examiner | Art Unit | |
| | Daniel M. Sullivan | 1636 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-32 and 34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-32 and 34* are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

Claims 1-32 and 34 are pending.

### *Election/Restrictions*

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-15, 17-21 and 34 drawn to a DNA sequence encoding of the human IL-18BP promoter or a fragment thereof wherein the 3'end of said DNA sequence or fragment thereof comprises one or more nucleotides from the 5' end of SEQ ID NO: 5.

Group II, claim(s) 16, drawn to a method for the production of a recombinant protein comprising culturing a host cell comprising a vector comprising a DNA according to claim 1 and isolating the recombinant protein produced.

Group III, claim(s) 22-29, drawn to a method of regulating cell specific expression of a gene of interest comprising transducing a target mammalian cell with a vector comprising a DNA according to claim 1 and transplanting such cell in an individual in need.

Group IV, claim(s) 30-31, drawn to a method of gene therapy for the treatment of a disease in an individual exhibiting elevated IFNγ in a body tissue comprising the administration of an effective amount of a vector comprising a DNA according to claim 1.

Group V, claim(s) 32, drawn to a transgenic mouse comprising the DNA sequence according to claim 1.

The inventions listed as Groups I-V do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

37 CFR 1.475(b) states:

"An international or a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to one of the following combinations of categories:

(1) A product and a process specially adapted for the manufacture of said product; or
(2) A product and process of use of said product; or
(3) A product, a process specially adapted for the manufacture of the said product, and a use of the said product; or
(4) A process and an apparatus or means specifically adapted for the manufacture of the said product; or
(5) A product, a process specially adapted for the manufacture of the said product, and an apparatus or means specifically designed for carrying out the said process."

Furthermore, according to PCT Rule 13.2, unity of invention exists only when there is a shared same or corresponding special technical feature among the claimed inventions. The "Instructions Concerning Unity of Invention" (MPEP, Administrative Instructions Under the PCT, Annex B, Part 1(b)) state, "The expression 'special technical features' is defined in Rule 13.2 as meaning those technical features that define a contribution which each of the inventions, considered as a whole, makes over the prior art." Thus, unity of invention exists only when the shared same or corresponding technical feature is a contribution over the art.

In the instant case, the technical feature shared by Groups I-V is the DNA sequence of Group I. However, claim 1 embraces any fragment of the IL-18BP promoter wherein the fragment comprises as few as one nucleotide from the 5' end of SEQ ID NO: 5. As the claim does not require that the fragment exhibit any function, does not require that the fragment be any minimum length and all four of the standard nucleotide bases are found in the 5' end of SEQ ID NO: 5, the broadest reasonable construction of the Group I invention encompasses any single nucleotide or any nucleic acid molecule. As nucleotides and nucleic acid molecules were well known in the art prior to the filing date of the instant application, the technical feature that unites the instant claims is clearly not a contribution over the art. Therefore, there is no special technical feature that unites the claims of Groups I-V.

The technical feature that defines Group I is a product having the structure and function of a DNA or nucleotide, which technical feature is not shared by the other Groups. The technical feature that defines Group II is the production of a recombinant protein in a cultured host cell, which technical feature is not required by the other Groups. The technical feature that defines Group III is the regulation of cell specific expression of a gene of interest by transducing a target mammalian cell and transplanting such cell in an individual in need, which technical feature is not required by the other Groups. The technical feature that defines Group IV is a process having the steps of a therapy for the treatment of a disease in an individual exhibiting elevated IFNγ in a body tissue comprising the administration of an effective amount of a vector, which technical feature is not required by the other Groups. The technical feature that defines Group V is a product having the structure and function of a transgenic mouse, which technical feature is not required by the other Groups.

Accordingly, Groups I-V are not so linked by the same or a corresponding special technical feature as to form a single general inventive concept. Therefore, restriction under 35 U.S.C. 121 and 372 is proper.

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

Group I

a) Elect a single species of fragment selected from SEQ ID NO: 2 and SEQ ID NO: 3.
b) Elect a single species of heterologous gene from those set forth in claims 10-11, which election will also be applied to claim 18.
c) Elect a single species of host cell selected from those set forth in claim 15.
d) Elect a single species of virus vector selected from an adeno associated virus and a retrovirus.
e) If retrovirus is elected, elect a single species of retrovirus from those set forth in claim 22.

Group III

a) Elect a single species of target cell selected from a hematopoietic stem cell, a monocyte and a macrophage.
b) Elect a treatment selected from treatment of HIV infection and treatment of hematopoietic disorders.
c) If hematopoietic disorders is elected, elect a single species of hematopoietic disorder selected from SCID, chronic granulomatous disease and thalassemia.

Group IV

Elect a single species of agent a single combination of agents to be coadministered.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An

argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

(a) the inventions have acquired a separate status in the art in view of their different classification;

(b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

(c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);

(d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

**Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined** even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected invention.**

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel M. Sullivan whose telephone number is 571-272-0779. The examiner can normally be reached on Monday through Friday 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Woitach, Ph.D. can be reached on 571-272-0739. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel M Sullivan/
Primary Examiner
Art Unit 1636